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A NEW HYPEROLIUS (AMPHIBIA ANURA) FROM KENYA

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In the course of recent studies of the amphibia of East Africa, the first author has collected a form of *Hyperolius* in south-eastern Kenya which appears to be undescribed. A brief description is given here as the species is to be treated further in two coming papers by Schiøtz.

Hyperolius sheldricki sp. n.

Holotype No. A/366/3 An adult male from north of Aruba Dam, Tsavo National Park (East) 3° 18' S, 38° 54' E. April 1967.

Paratypes 6 ♂♂, A/366/2, 4-8 collected together with the holotype.

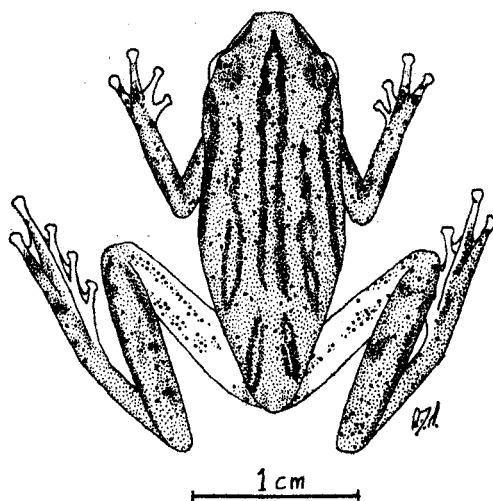
8 ♂♂, A/929/1-8 from 15 km west of Kakoneni 3° 14' S, 39° 40' E. April 1969.

The holotype and 6 paratypes are to be kept in The National Museum, Nairobi, 6 paratypes in the Zoological Museum, Copenhagen, and 2 paratypes in the British Museum (Nat. Hist.).

Diagnosis: A small member of the *Hyperolius viridiflavus* superspecies, the female phase* with a characteristic, apparently constant, pattern in dark and light brown as in Fig. 1; in life the inner aspects of the thigh and tibia dark maroon. The upper eyelid is slightly pointed in profile.

Description of the holotype: The snout is short; the gular sac and protective flap very large; webbing of the hind foot extensive; the upper eyelid bears a fairly conspicuous conical protuberance. The colour pattern is illustrated in Fig. 1, and consists of dark brown stripes on a very light brown background; dark brown spots are scattered fairly evenly over the back and upper parts of the arms and legs, with a concentration on the thighs and also on the gular flap. The belly is white, and the underside of hands, feet, femur, and tibia a dark maroon in life—pink in spirit. Some dimensions are given in Table 1.

*In most members of the genus *Hyperolius* all juveniles and some adult males have a cryptically coloured "juvenile phase", while all adult females and some of the males have what is often an entirely different "female phase". The juvenile phase is often identical or similar in different species, but the appearance of the female phase is often diagnostic.



Hyperolius sheldricki, holotype

Description of paratypes: All the paratypes are adult males. Those of series A/366 from near Aruba Dam are very uniform and similar to the holotype. Apart from A/929/1 which was kept in captivity for some time and is similar to the holotype, the series from west of Kakoneni differs somewhat as only three show, rather indistinctly, the diagnostic pattern; the remaining four having a more or less uniform, whitish, dorsum which is undoubtedly the juvenile phase. One of these, A/929/4, shows faint traces of lumbar spots, which seem to be the remains of an hourglass pattern. The combination of an hourglass pattern in the juvenile phase and a striped female phase would be unique in the *H. viridiflavus* superspecies.

Habitat: *H. sheldricki* appears to be confined to very temporary rain pools in a hot arid area with an erratic rainfall averaging 250 mm or less a year. This is in contrast to the neighbouring *H. viridiflavus ferniquei* (Mocquard) which seems to require breeding sites with permanent or nearly permanent water and a good reed cover.

The first population (A/366) was found a few days after the first heavy rain following a long dry period. They were in a shallow pan in which stood coarse dry grass and which was of a more temporary nature than the majority of other waterholes in the vicinity. The pan was practically unoccupied by other amphibia characteristic of the area. The frogs were very numerous and were calling while clinging to long grass stems protruding from the water. The second population (A/929) was calling in sparse grass bordering a shallow roadside ditch immediately after the first heavy storm of the rainy season. The water in the ditch had completely disappeared a few hours after the rain ceased. A number of nearby waterholes were investigated and, although densely populated with other amphibia, were not occupied by *H. sheldricki*.

Systematic remarks: By the shape of the head, the large gular pouch, and the voice, *H. sheldricki* is a typical member of the *H. viridiflavus* superspecies.

No.	Loc.	Snout-vent	Tibia	width of prot. flap	Foot
Holotype A/366/3	near Aruba	24.1	12.4	6.9	10.7
Paratype A/366/2	" "	23.8	12.3	7.9	10.9
" /4	" "	22.2	12.7	7.2	10.7
" /5	" "	23.4	12.2	6.5	10.6
" /6	" "	24.0	12.2	6.8	10.7
" /7	" "	23.2	12.6	6.9	10.9
" /8	" "	23.2	12.1	6.2	10.7
" A/929/1	W. of Kakoneni	22.2	10.5	6.1	9.4
" /2	" "	18.2	9.5	4.6	8.6
" /3	" "	21.4	10.6	6.7	8.4
" /4	" "	21.7	10.6	6.0	9.7
" /5	" "	19.2	9.5	5.0	8.3
" /6	" "	21.3	10.4	5.7	8.9
" /7	" "	21.3	10.0	6.0	8.9
" /8	" "	20.7	9.5	6.5	8.6

Table 1 Measurements of *H. sheldricki* in millimetres

It is regarded as having full specific rank as it does not show any great relationship in pattern to the adjacent forms of that group: *H. v. ferniquei*, *H. v. glandicolor* (Peters), and *H. mariae* Barbour and Loveridge. *H. v. ferniquei* has, furthermore, been collected at Kenani less than 80 km from the type locality. The nature of the known breeding localities would suggest a strong ecological separation.

It is a pleasure for us to name this new species after David Sheldrick, warden of Tsavo National Park (East), in appreciation of his invaluable help and hospitality over many years on occasions when we, more often one of us (A.D.-M.), have been at Tsavo.

ACKNOWLEDGEMENTS

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